MONITORING AND PREDICTION SYSTEM OF HYPERTENSION PATIENTS USING WEB-BASED DECISION TREE ALGORITHM (Case Study: Ngaglik I Health Center, Sleman Regency)

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ABSTRACT

Ngaglik I Health Center, Sleman Regency is one of the health institutions that serves the community in health services such as non-communicable diseases such as hypertension. The patient registration process is carried out using the Smart Sehat application and monitoring is only carried out once a month during prolanis activities. Health workers have difficulty monitoring patients in sports activities and compliance with taking medication for patients who only take medication at the pharmacy that has been prescribed by the treating doctor. This is quite vulnerable to the problem of patients not taking their medication regularly. Reports of patient examination results given to patients are also still done manually using paper and do not yet have an early prediction system for hypertension. This study aims to create a system that can facilitate health workers and patients in monitoring hypertension, providing health examination information and predictions based on risk factors for hypertension. The method of creating a system for prediction uses the Decision Tree algorithm, the data used is obtained from Ngaglik I Health Center, Sleman Regency which is the result of hypertension census data and through a questionnaire of 80 data. The accuracy results obtained were 0.8125%, with a precision of 0.846% and a recall of 100%, black box testing on the system produced 34 test cases and no defects or errors were found and passed the test by 100%. and the test results using the user acceptance test percentage of 89.83% were categorized as very agree or good. So it can be concluded that the testing that has been carried out is in accordance with the needs in making a Monitoring and Prediction System for Hypertension Patients Using a Web-Based Decision Tree Algorithm (Case Study: Ngaglik I Health Center, Sleman Regency).

Keywords: Monitoring System, Hypertension Prediction, Decision Tree, Web, Ngaglik 1 Health Center, Sleman Regency.